



Form PTO-1449 (modified)

of Patents and Publications for Applicant's  
INFORMATION DISCLOSURE STATEMENT  
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Atty. Docket No.  
UTSD:546USD1/GNS

Serial No.  
09/748,451

Applicant  
Xiaodong Wang and Xuesong Liu

Filing Date:  
December 22, 2000

Group:  
1652

U.S. Patent Documents  
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Foreign Patent Documents  
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Other Art  
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### U.S. Patent Documents

Exam. Init.	Ref. Des.	Document Number	Date	Name	Class	Sub Class	Filing Date of App.
<i>WLN</i>	A1	5,912,141	6/15/99	Brojatsch <i>et al.</i>	435	69.1	

### Foreign Patent Documents

Exam. Init.	Ref. Des.	Document Number	Date	Country	Class	Sub Class	Translation Yes/No
	B1						

### Other Art (Including Author, Title, Date Pertinent Pages, Etc.)

Exam. Init.	Ref. Des.	Citation
<i>WLN</i>	C1	Alnemri <i>et al.</i> , "Human ICE/CED-3 protease nomenclature," <i>Cell</i> , 87:171, 1996.
↑	C2	Casicola-Rosen <i>et al.</i> , "Apopain/CPP32 cleaves proteins that are essential for cellular repair: a fundamental principle of apoptotic death," <i>J. Exp. Med.</i> , 183:1957-1964, 1996.
	C3	Chinnaiyan <i>et al.</i> , "Molecular ordering of the cell death pathway," <i>J. Biol. Chem.</i> , 271(9):4573-4576, 1996.
	C4	Darmon <i>et al.</i> , "Cleavage of CPP32 by granzyme B represents a critical role for granzyme B in the induction of target cell DNA fragmentation," <i>J. Biol. Chem.</i> , 271:21709-21712, 1996.
	C5	Datta <i>et al.</i> , "Activation of the CPP32 protease in apoptosis induced by 1-β-D-arabinofuranosylcytosine and other DNA-damaging agents," <i>Blood</i> , 88(6):1936-1943, 1996.
	C6	Datta <i>et al.</i> , "Activation of a CrmA-insensitive, p35-sensitive pathway in ionizing radiation-induced apoptosis," <i>J. Biol. Chem.</i> , 272(3):1965-1969, 1997.
	C7	Dubrez <i>et al.</i> , "Pivotal role of a DEVD-sensitive step in etoposide-induced and Fas-mediated apoptotic pathways," <i>J. EMBO.</i> , 15(20):5504-5512, 1996.
↓	C8	Enari <i>et al.</i> , "Sequential activation of ICE-like and CPP32-like proteases during Fas-mediated apoptosis," <i>Nature</i> , 380:723-726, 1996.
<i>WLN</i>	C9	Enari <i>et al.</i> , "A caspase-activated Dnase that degrades DNA during apoptosis, and its inhibitor ICAD," <i>Nature</i> , 391(1):43-50, 1998.

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EXAMINER: *WLN*

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**Other Art (Including Author, Title, Date Pertinent Pages, Etc.)**

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<i>WWM</i>	C10	Erhardt and Cooper, "Activation of the CPP32 apoptotic protease by distinct signaling pathways with differential sensitivity to Bcl-x <sub>L</sub> ," <i>J. Biol. Chem.</i> , 271(30):17601-17604, 1996.
↑	C11	Faleiro <i>et al.</i> , "Multiple species of CP 32 and Mch2 are the major active caspases present in apoptotic cells," <i>J. EMBO</i> , 16:2271, 1997.
	C12	Fernandes-Alnemri <i>et al.</i> , "CPP32, a novel human apoptotic protein with homology to <i>caenorhabditis elegans</i> cell death protein Ced-3 and mammalian interleukin-1 $\beta$ -converting enzyme," <i>J. Biol. Chem.</i> , 269(49):30761-30764, 1994.
	C13	Goldberg <i>et al.</i> , "Cleavage of huntingtin by apopain, a proapoptotic cysteine protease, is modulated by the polyglutamine tract," <i>Nat. Genet.</i> , 13(4):442-449, 1996.
	C14	Hartl <i>et al.</i> , "Molecular chaperones in protein folding: the art of avoiding sticky situations," <i>TIBS</i> , 19:20, 1994.
	C15	Hasegawa <i>et al.</i> , "Involvement of CPP32/Yama(-like) proteases in Fas-mediated apoptosis," <i>Cancer Res.</i> , 56:1713-1718, 1996.
	C16	Jackson <i>et al.</i> , "Chromatin fractionation procedure that yields nucleosomes containing near-stoichiometric amounts of high mobility group nonhistone chromosomal proteins," <i>Biochemistry</i> , 18:3739-3748, 1979.
	C17	Jacobson <i>et al.</i> , "Role of Ced-3/ICE-family proteases in staurosporine-induced programmed cell death," <i>J. Cell Biol.</i> , 133(5):1041-1051, 1996.
	C18	Kaufman <i>et al.</i> , "Specific proteolytic cleavage of poly(ADP-ribose) polymerase: an early mark chemotherapy-induced apoptosis," <i>Cancer Res.</i> , 53:3976-3985, 1993.
	C19	Kerr <i>et al.</i> , "Apoptosis: a basic biological phenomenon with wide-ranging implications in Tissue Kinetics," <i>Br. J. Cancer</i> , 26:239, 1972.
	C20	Khokhlatchev <i>et al.</i> , "Reconstitution of mitogen-activated protein kinase phosphorylation cascades in bacteria," <i>J. Biol. Chem.</i> , 272(17):11057-11062, 1997.
↓	C21	Kuida <i>et al.</i> , "Decreased apoptosis in the brain and premature lethality in CPP32-deficient mice," <i>Nature</i> , 384:368-372, 1996.
<i>WWM</i>	C22	Lazebnik <i>et al.</i> , "Studies of the lamin proteinase reveal multiple parallel biochemical pathways during apoptotic execution," <i>Proc. Natl. Acad. Sci. USA</i> , 92:9042-9046, 1995.

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EXAMINER:

*William W. Miller*

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<i>Wang</i>	C23	Liu <i>et al.</i> , "Induction of Apoptotic Program in Cell-Free Extracts: Requirement for dATP and Cytochrome c," <i>Cell</i> , 86:147-157, 1996.
<i>A</i>	C24	Liu <i>et al.</i> , "DFF, a heterodimeric protein that functions downstream of Caspase-3 to trigger DNA fragmentation during apoptosis," <i>Cell</i> , 89:175-184, 1997.
	C25	Liu <i>et al.</i> , "Purification and Characterization of an Interleukin-1 $\beta$ -converting Enzyme Family Protease that Activates Cysteine Protease P32 (CPP32)*," <i>J. Biol. Chem.</i> , 271:13371-13376, 1996.
	C26	Luo and Sawadogo, "Functional domains of the transcription factor USF2: Atypical nuclear localization signals and context-dependent transcriptional activation domains," <i>Mol. Cell Biol.</i> , 16(4):1367-1375, 1996.
	C27	Martin <i>et al.</i> , The cytotoxic cell protease granzyme B initiates apoptosis in a cell-free system by proteolytic processing and activation of the ICE/CED-3 family protease, CPP32, via a novel two-step mechanism," <i>J. EMBO</i> , 15(10):2407-2416, 1996.
	C28	Martins <i>et al.</i> , "Activation of multiple interleukin-1 $\beta$ converting enzyme homologues in cytosol and nuclei of HL-60 cells during etoposide-induced apoptosis," <i>J. Biol. Chem.</i> , 272:7421-7430, 1997.
	C29	Na <i>et al.</i> , "D4-GDI, a substrate of CPP32, is proteolyzed during Fas-induced apoptosis," <i>J. Biol. Chem.</i> , 271(19):11209-11213, 1996.
	C30	Nicholson and Thornberry, "Caspases: killer proteases," <i>TIBS</i> , 257:299-306, 1997.
	C31	Nicholson <i>et al.</i> , "Identification and inhibition of the ICE/CED-3 protease necessary for mammalian apoptosis," <i>Nature</i> , 376:37-43, 1995.
	C32	Paine <i>et al.</i> , "Protein loss during nuclear isolation," <i>J. Cell Biol.</i> , 97:1240-1242, 1983.
	C33	Peters <i>et al.</i> , "Evidence for the location of high mobility group protein T in the internucleosomal linker regions of trout testis chromatin," <i>J. Biol. Chem.</i> , 254:3358-3361, 1979.
<i>Wang</i>	C34	Rädler <i>et al.</i> , "Structure of DNA-cationic liposome complexes DNA intercalation in multilamellar membranes in distinct interhelical packing regimes," <i>Science</i> , 275:810-814, 1997.
<i>Wang</i>	C35	Roche <i>et al.</i> , "The involvement of histone H1° in chromatin structure," <i>Nucleic Acids Res.</i> , 13:2843-2853, 1985.

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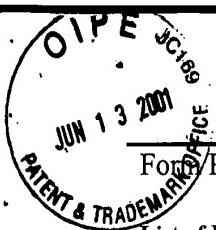
EXAMINER:

*William W. Zhou*

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<i>WWM</i>	C36	Sakahira <i>et al.</i> , "Cleavage of CAD inhibitor in CAD activation and DNA degradation during apoptosis," <i>Nature</i> , 391(1):96-99, 1998.
<i>T</i>	C37	Schlegel <i>et al.</i> , "CPP32/Apopain is a key interleukin 1 $\beta$ converting enzyme-like protease involved in Fas-mediated apoptosis," <i>J. Biol. Chem.</i> , 271:1841-1844, 1996.
	C38	Schroter and Bode, "The binding sites for large and small high-mobility-group (HMG) proteins," <i>Eur. J. Biochem.</i> , 127:429-436, 1982.
	C39	Shiraishi <i>et al.</i> , "Adenovirus-mediated gene transfer using in-situ perfusion of the liver graft," <i>Transplant International</i> , 1-0(3):202-206, 1997.
	C40	Smith and Moss, "Infectious poxvirus vectors have capacity for at least 25000 base pairs of foreign DNA," <i>Gene</i> , 25:21-28, 1983.
	C41	Song <i>et al.</i> , "DNA-dependent protein kinase catalytic subunit: a target for an ICE-like protease in apoptosis," <i>J. EMBO</i> , 15(13):3238-3246, 1996.
	C42	Song <i>et al.</i> , "DCP-1, a <i>drosophila</i> cell death protease essential for development," <i>Science</i> , 275:536-540, 1997.
	C43	Sun <i>et al.</i> , "Separate metabolic pathways leading to DNA fragmentation and apoptotic chromatin condensation," <i>J. Exp. Med.</i> , 179:559-568, 1994.
	C44	Takahashi <i>et al.</i> , "Affinity labeling displays the stepwise activation of ICE-related proteases by Fas, staurosporine, and CrmA-sensitive caspase-8," <i>Oncogene</i> , 14:2741-2752, 1997.
	C45	Tam <i>et. al.</i> , "SN <sup>2</sup> deprotection of synthetic peptides with a low concentration of HF in dimethyl sulfide: evidence and application in peptide synthesis," <i>J. Am. Chem. Soc.</i> , 105:6442-6455, 1983.
	C46	Tewari <i>et al.</i> , "Yama/CPP32 $\beta$ , a mammalian homolog of CED-3, is a CrmA-inhibitable protease that cleaves the death substrate poly(ADP-ribose) polymerase," <i>Cell</i> , 81:801-809, 1995.
<i>V</i>	C47	Vaux, "CED-4 - The third horseman of apoptosis," <i>Cell</i> , 90:389-390, 1997.
<i>WWM</i>	C48	Walther and Stein, "Cell type specific and inducible promoters for vectors in gene therapy as an approach for cell targeting," <i>J. Mol. Med.</i> , 74:379-392, 1996.

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EXAMINER:

*Waldemar W. Rhoer*

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## Other Art

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Exam. Init.	Ref. Des.	Citation
<i>WWM</i>	C49	Wang <i>et al.</i> , "Cleavage of sterol regulatory element binding proteins (SREBPs) by CPP 32 during apoptosis," <i>J. EMBO</i> , 15:1012-1020, 1996.
<i>WWM</i>	C50	Wang <i>et al.</i> , "Mice lacking ADPRT and poly(ADP-ribosyl)ation develop normally but are susceptible to skin disease," <i>Gene &amp; Dev.</i> , 9:509-520, 1995.
	C51	Wang <i>et al.</i> , "Nuclear protein that binds sterol regulatory element of low density lipoprotein receptor promoter," <i>J. Biol. Chem.</i> , 268(19):14497-14504, 1993.
	C52	Wang <i>et al.</i> , "Purification of an interleukin-1 $\beta$ converting enzyme-related cysteine protease that cleaves sterol regulatory element-binding proteins between the leucine zipper and transmembrane domains," <i>J. Biol. Chem.</i> , 270(30):18044-18050, 1995.
	C53	Wang <i>et al.</i> , "R-ras promotes apoptosis caused by growth factor deprivation via a Bcl-2 suppressible mechanism," <i>J. Cell Biol.</i> , 129:1103-1114, 1995.
	C54	White, "Life, death, and the pursuit of apoptosis," <i>Genes &amp; Dev.</i> , 10:1-15, 1996.
	C55	Wong <i>et al.</i> , "Appearance of $\beta$ -lactamase activity in animal cells upon liposome-mediated gene transfer," <i>Gene</i> , 10:87-94, 1980.
	C56	Wyllie, "An endonuclease at last," <i>Nature</i> , 391:20-21, 1998.
	C57	Wyllie <i>et al.</i> , "Cell Death: The Significance of Apoptosis," <i>Int. Rev. Cytol.</i> , 68:251-306, 1980.
	C58	Wyllie <i>et al.</i> , "Chromatin cleavage in apoptosis: association with condensed chromatin morphology and dependence on macromolecular synthesis," <i>J. Pathol.</i> , 142:67-77, 1984.
	C59	Wyllie, "The genetic regulation of apoptosis," <i>Curr. Opin. in Genet. Dev.</i> , 5:97-104, 1995.
	C60	Xue <i>et al.</i> , "The <i>Caenorhabditis elegans</i> cell-death protein CED-3 is a cysteine protease with substrate specificities similar to those of the human CPP32 protease," <i>Genes &amp; Dev.</i> , 10:1073-1083, 1996.
	C61	Yokoyama <i>et al.</i> , "SREBP-1, a basic-helix-loop-helix-leucine zipper protein that controls transcription of the low density lipoprotein receptor gene," <i>Cell</i> , 75:187-197, 1993.
<i>WWM</i>	C62	Yuan <i>et al.</i> , "The <i>C. elegans</i> Cell Death Gene ced-3 Encodes a Protein Similar to Mammalian Interleukin-1 $\beta$ -Converting Enzyme," <i>Cell</i> , 75:641-652, 1993.
<i>WWM</i>	C63	Zamzami <i>et al.</i> , "Mitochondrial control of nuclear apoptosis," <i>J. Exp. Med.</i> , 183:1533-1544, 1996.

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Exam. Init.	Ref. Des.	Citation
<i>Wu</i>	C64	Zou <i>et al.</i> , "Apaf-1, a Human Protein Homologous to C. elegans CED-4, Participates in Cytochrome c-Dependent Activation of Caspase-3," <i>Cell</i> , 90:405, 1997.
<i>Wu</i>	C65	Halenbeck <i>et al.</i> , "CPAN, a human nuclease regulated by the caspase-sensitive inhibitor DFF45," <i>Current Biology</i> , 8:527-540, 1998.
	C66	International Search Report dated January 22, 1999 (PCT/US98/07895) (UTFD:546P).
	C67	Liu <i>et al.</i> , "The 40-kDa subunit of DNA fragmentation factor induces DNA fragmentation and chromatin condensation during apoptosis," <i>Proc. Natl. Acad. Sci. USA</i> , 95:8461-8466, 1998.
	C68	Mukae <i>et al.</i> , "Molecular cloning and characterization of human caspase-activated DNase," <i>Proc. Natl. Acad. Sci. USA</i> , 95:9123-9128, 1998.
	C69	Wu <i>et al.</i> , "Inhibition of Nf- $\kappa$ B/Rel induces apoptosis of murine B Cells," <i>EMBO J.</i> , 15:4682-4690, 1996.
	C70	Lee <i>et al.</i> , "Involvement of histone hyperacetylation in triggering DNA fragmentation of rat thymocytes undergoing apoptosis," <i>FEBS Lett.</i> 395:183-187, 1996.
<i>Wu</i>	C71	Cai <i>et al.</i> , "IkBalpha overexpression in human breast carcinoma NCF7 cells inhibits nuclear factor- $\kappa$ B activation but not tumor necrosis factor-alpha-induced apoptosis," <i>J. Biol. Chem.</i> , 272:96-101, 1997.
<i>Wu</i>	C72	Waring <i>et al.</i> , "Apoptosis induced by gliotoxin is preceded by phosphorylation of histone H3 and enhanced sensitivity of chromatin to nuclease digestion,"

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EXAMINER:

*William Moon*

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